

TRANSACTIONS
OF THE
American Society of Civil Engineers.

INDEX.
VOLUME XXXIV.

JULY TO DECEMBER, 1895.

NOTE.—In this Index, Subjects and Writers are given Alphabetically. Titles of Papers are enclosed by quotation marks when indexed alone or under the Author's name. When indexed under the name of a person discussing a paper, the titles are not so enclosed. Titles of Papers are entered with reference to the subject and also under the first significant word.

INDEX.

VOLUME XXXIV,

JULY TO DECEMBER, 1895.

ABBOT, F. V.

Lonesome Valley Viaduct, K., C. G. & L. R. R., 253.
Mexico-United States Boundary, 279.

ALLEN, KENNETH.

High Masonry Dams, 512.
Mexico-United States Boundary Survey, 280.
Separate Sewer System, 228.

ARCHES, FLOOR.

Tests of— Fr. von Emperger, 521; George Hill, 542.

BATES, ONWARD. Life of an Iron Railroad Bridge, 312.

BOGART, JOHN. Water-Works of Syracuse, N. Y., 58.

BRACKETT, DEXTER.

"Consumption and Waste of Water," 185, 221.
Moving 36-In. Water Mains, 538.

BRIDGES.

"What is the Life of an Iron Railroad Bridge?" (With Discussion.) J. E. Greiner, 294.

"Construction of Substructure for Lonesome Valley Viaduct, Knoxville, Cumberland Gap and Louisville Railroad." (With Discussion.) Gustave R. Tuska, 247.

BROOMALL, C. M. High Masonry Dams, 514.

BUCK, L. L. Water-Works of Syracuse, N. Y., 62.

CAMPBELL, H. H. "The Physical Qualities of Acid Open-Hearth Nickel Steel as Compared with Carbon Steel of Similar Tensile Strength," 285.

CARTWRIGHT, ROBERT. Consumption and Waste of Water, 213.

CAST-IRON.

"Notes on Manufacture and Properties of Malleable Cast-Iron."

H. R. Stanford, 1.

CHRISTIAN, G. L. Water-Works of Syracuse, N. Y., 62.

CLARKE, T. C.

High Masonry Dams, 506.

Life of an Iron Railroad Bridge, 309.

COLD STORAGE.

At Reading Terminal Station, Philadelphia. Joseph M. Wilson, 159.

CONCRETE.

Use of — in Construction of Substructure for Lonesome Valley Viaduct, Knoxville, Cumberland Gap and Louisville Railroad. Gustave R. Tuska, 247.

"CONSTRUCTION OF SUBSTRUCTURE FOR LONESOME VALLEY Viaduct, Knoxville, Cumberland Gap and Louisville Railroad." Gustave R. Tuska, 247.

Discussion: George S. Morison, 252; Charles E. Emery, 252; Foster Crowell, 252; F. V. Abbot, 253; Bernard R. Green, 253.

Correspondence: William Barclay Parsons, 254; George H. Pegram, 255; Walter H. Gahagan, 256; Gustave R. Tuska, 258.

"CONSUMPTION AND WASTE OF WATER." Dexter Brackett, 185.

Discussion: Desmond Fitzgerald, 204; L. Frederick Rice, 204; Charles G. Darrach, 204; H. F. Dunham, 204; John Thomson, 205; J. J. R. Croes, 207; E. Kuichling, 208.

Correspondence: L. J. Le Conte, 211; Clemens Herschel, 212; Robert Cartwright, 213; Daniel W. Mead, 215; Allen Hazen, 218; Dexter Brackett, 221.

CROES, J. J. R.

Consumption and Waste of Water, 207.

Water-Works of Syracuse, N. Y., 54, 57.

CROWELL, FOSTER. Lonesome Valley Viaduct, K., C. G. and L. R. R., 252.

DAMS.

Construction of Crib — T. C. Clarke, 507.

Masonry Core Wall in Earthen — E. Sherman Gould, 56.

"Notes on High Masonry —" John Van Buren, 493.

DARRACH, C. G.

Consumption and Waste of Water, 204.

Separate Sewer System, 226.

The Philadelphia and Reading Terminal Railroad and Station in Philadelphia, 180.

The Temperature of Lakes, 110.

"DISCHARGE OF THE MISSISSIPPI RIVER." William Starling, 347.

DUNHAM, H. F.

Consumption and Waste of Water, 204.

High Masonry Dams, 517.

EMERY, CHARLES E.

Lonesome Valley Viaduct, K., C. G. & L. R. R., 252.

Water-Works of Syracuse, N. Y., 60.

EMPERGER, FR. VON. "Hollow Tile Floors, Past and Present," 521.

"EXPERIMENTS ON THE DISCHARGE OF A 30-IN. STOP-Valve." J. Waldo Smith, 235.

Discussion: E. Kuichling, 243.

Correspondence: J. Waldo Smith, 246.

FANNING, J. T. The Temperature of Lakes, 67.

FIRE-PROOF CONSTRUCTION.

"Tests of Fire-Proof Flooring Material." George Hill, 542.

FITZGERALD, DESMOND.

Consumption and Waste of Water, 204.

"The Temperature of Lakes," 67.

FLOORS. TILE —

"Hollow Tile Floors, Past and Present." Fr. von Emperger, 521.

"Tests of Fire-Proof Flooring Material." George Hill, 542.

FLUSH TANKS.

"Separate Sewer System Without Automatic Flush Tanks." (With Discussion.) F. S. Odell, 223.

FOLWELL, A. PRESCOTT. Separate Sewer System, 230.

GAHAGAN, WALTER H. Lonesome Valley Viaduct, K., C. G. & L. R. R., 256.

GATE.

Experiments on the Discharge of a 30-In. Water — J. Waldo Smith, 235.

GOULD, E. SHERMAN. Water-Works of Syracuse, N. Y., 56.

GREEN, BERNARD R. Lonesome Valley Viaduct, K., C. G. & L. R. R., 253.

GREENE, J. N. Water-Works of Syracuse, N. Y., 61.

GREINER, J. E. "What is the Life of an Iron Railroad Bridge?" (With Discussion.) 294, 335.

HAZEN, ALLEN. Consumption and Waste of Water, 218.

HAZLEHURST, G. B. Life of an Iron Railroad Bridge, 315.

HERING, RUDOLPH. Separate Sewer System, 226.

HERSCHEL, CLEMENS. Consumption and Waste of Water, 212.

HILL, GEORGE. "Tests of Fire-Proof Flooring Material," 542.

HILL, JOHN W. Water-Works of Syracuse, N. Y., 63.

HILL, WILLIAM R. "The Water-Works of Syracuse, N. Y.," 23, 64.

HOECH, THEOD. G. Life of an Iron Railroad Bridge, 327.

"HOLLOW TILE FLOORS, PAST AND PRESENT." Fr. von Emperger, 521.

HYDRAULICS.

"Discharge of the Mississippi River." William Starling, 347.

"Experiments on the Discharge of a 30-In. Stop Valve." J. Waldo Smith, 235.

IRON. CAST. See Cast-Iron.

JOHNSON, J. B. Mexico-United States Boundary, 283.

KATTÉ, WALTER. Life of an Iron Railroad Bridge, 318.

KIERSTED, WYNKOOP. Separate Sewer System, 227.

KUICHLING, E.

Consumption and Waste of Water, 208.

Discharge of a 30-In. Stop Valve, 243.

LAKES.

"The Temperature of Lakes." Desmond FitzGerald, 67.

LANDRETH, WILLIAM B.

Mexico-United States Boundary, 281.

Separate Sewer System, 231.

LE CONTE, L. J.

Consumption and Waste of Water, 211.

High Masonry Dams, 515.

Life of an Iron Railroad Bridge, 318.

Separate Sewer System, 232.

Water-Works of Syracuse, N. Y., 64.

LINDENTHAL, GUSTAV. High Masonry Dams, 505.

MEAD, DANIEL W. Consumption and Waste of Water, 215.

METERS.

Current— William Starling, 365.

Water— "Consumption and Waste of Water." (With Discussion.) Dexter Brackett, 185.

MEXICO-UNITED STATES BOUNDARY. Topography on the Survey of— J. L. Van Ornum, 259.

MISSISSIPPI RIVER.

"The Discharge of the—" William Starling, 347.

MONTFORT, R. Life of an Iron Railroad Bridge, 323.

MOORE, E. C. "Moving Two 36-In. Water Mains Without Shutting Off the Water." (With Discussion.) 532, 540.

MORISON, GEORGE S.

Life of an Iron Railroad Bridge, 308.

Lonesome Valley Viaduct, K., C. G. & L. R. R., 252.

"MOVING TWO 36-IN. WATER MAINS WITHOUT SHUTTING Off the Water." E. C. Moore, 532.

Discussion: Edward Wegmann, Jr., 536; James Owen, 537; Joseph C. Platt, 537.

Correspondence: Dexter Brackett, 538; E. C. Moore, 540.

"NOTES ON HIGH MASONRY DAMS." John D. Van Buren, 493.

Discussion: William E. Worthen, 505; Gustav Lindenthal, 505; Robert Ridgway, 505; F. W. Skinner, 505; T. C. Clarke, 506; Edward Wegmann, Jr., 508.

Correspondence: Kenneth Allen, 512; James Duane, 513; C. M. Broomall, 514; M. S. Parker, 515; L. J. Le Conte, 515; H. F. Dunham, 517; John D. Van Buren, 517.

"NOTES ON MANUFACTURE AND PROPERTIES OF MALLEABLE Cast-Iron." H. R. Stanford, 1.

ODELL, F. S. "The Separate Sewer System Without Automatic Flush Tanks," 223, 233.

OWEN, JAMES. Moving 36-In. Water Mains, 537.

PARKER, M. S. High Masonry Dams. 515.

PARSONS, WILLIAM BARCLAY. Lonesome Valley Viaduct, K., C. G. & L. R. R., 254.

PEGRAM, GEORGE H.

Life of an Iron Railroad Bridge, 320.

Lonesome Valley Viaduct, K., C. G. & L. R. R., 255.

"PHILADELPHIA AND READING TERMINAL RAILROAD AND Station in Philadelphia." Joseph M. Wilson, 115.

Discussion: Charles G. Darrach, 180.

Correspondence: Samuel Tobias Wagner, 181; Joseph M. Wilson; 184.

"PHYSICAL QUALITIES OF ACID OPEN-HEARTH NICKEL Steel as Compared with Carbon Steel of Similar Tensile Strength." H. H. Campbell, 285.

PLATT, JOSEPH C. Moving 36-In. Water Mains, 537.

POWER PLANT.

At Reading Terminal Station, Philadelphia. Joseph M. Wilson, 140.

PURDON, C. D. Life of an Iron Railroad Bridge, 314.

RAILROADS.

Knoxville, Cumberland Gap and Louisville Railroad, Lonesome Valley Viaduct. Gustave R. Tuska, 247.

Philadelphia and Reading Terminal Railroad. Joseph M. Wilson, 115.

RAILROADS, STATIONS.

The Philadelphia and Reading Terminal Railroad and Station in Philadelphia. Joseph M. Wilson, 115.

RESERVOIRS.

Temperature in— Desmond FitzGerald, 67.

RICE, L. FREDERICK. Consumption and Waste of Water, 204.

RIDGWAY, ROBERT. High Masonry Dams, 505.

RIVERS.

Measurement of Velocity in— William Starling, 363.

"The Discharge of the Mississippi River." William Starling, 347.

SCHNEIDER, C. C. Life of an Iron Railroad Bridge, 328.

"SEPARATE SEWER SYSTEM WITHOUT AUTOMATIC FLUSH Tanks." F. S. Odell, 223.

Discussion: C. G. Darrach, 226; Rudolph Hering, 226.

Correspondence: Wynkoop Kiersted, 227; Kenneth Allen, 228; A. Prescott Folwell, 230; William B. Landreth, 231; L. J. Le Conte, 232; F. S. Odell, 233.

SEWERS AND SEWERAGE.

"Separate Sewer System Without Automatic Flush Tanks." (With Discussion.) F. S. Odell, 223.

SKINNER, F. W. High Masonry Dams, 505.

SMITH, J. WALDO. "Experiments on the Discharge of a 30-In. Stop-Valve," 235, 246.

SNOW, J. P. Life of an Iron Railroad Bridge, 325.

SPECIFICATIONS.

Arch Bridges over Streets Between Callowhill and Arch Streets, on the Line of the Philadelphia and Reading Terminal Railroad. Joseph M. Wilson, 171.

Excavation and Masonry on the Philadelphia and Reading Terminal Railroad Company's Lines in the City of Philadelphia. Joseph M. Wilson, 166.

Furnishing, Manufacture and Erection of Structural Iron Work for the Train Sheds, etc., of the Passenger Station of the Philadelphia and Reading Terminal Railroad Company at Twelfth and Market Streets, Philadelphia. Joseph M. Wilson, 175.

STANFORD, H. R. "Notes on Manufacture and Properties of Malleable Cast-Iron," 1.

STANWOOD, JAMES H. Life of an Iron Railroad Bridge, 310.

STARLING, WILLIAM. "The Discharge of the Mississippi River," 347.

STEARNS, F. P. The Temperature of Lakes, 112.

STEEL.

"The Physical Qualities of Acid Open-Hearth— as Compared with Carbon— of Similar Tensile Strength." H. H. Campbell, 285.

SURVEYING. STADIA.

"Topography on the Survey of the Mexico-United States Boundary." (With Discussion.) J. L. Van Ornum, 259.

SYRACUSE, N. Y.

"The Water-Works of—" William R. Hill, 23.

"TEMPERATURE OF LAKES." Desmond FitzGerald, 67.

Discussion: J. T. Fanning, 110; C. G. Darrach, 110, 180; F. P. Stearns, 112.

"TESTS OF FIRE-PROOF FLOORING MATERIAL." George Hill, 542.

THOMSON, JOHN. Consumption and Waste of Water, 205.

TIMBER.

Strength of— "What is the Life of an Iron Railroad Bridge?" (With Discussion.) 301, 313, 320, 323, 327.

"TOPOGRAPHY ON THE SURVEY OF THE MEXICO-UNITED States Boundary." J. L. Van Ornum, 259.

Discussion: F. V. Abbot, 279; W. L. Webb, 279.

Correspondence: Kenneth Allen, 280; William B. Landreth, 281; J. B. Johnson, 283; J. L. Van Ornum, 284.

TUSKA, GUSTAVE R. "Construction of Substructure for Lonesome Valley Viaduct, Knoxville, Cumberland Gap and Louisville Railroad." (With Discussion.) 247, 258.

VALVES.

"Experiments on the Discharge of a 30-In. Stop Valve." (With Discussion.) J. Waldo Smith, 243.

VAN BUREN, JOHN D. "Notes on High Masonry Dams." (With Discussion.) 493, 517.

VAN ORNUM, J. L.

"Topography on the Survey of the Mexico-United States Boundary." (With Discussion.) 259, 284.

Water-Works of Syracuse, N. Y., 63.

VIADUCTS.

"Construction of Substructure for Lonesome Valley Viaduct, Knoxville, Cumberland Gap and Louisville Railroad." (With Discussion.) Gustave R. Tuska, 247.

WAGNER, SAMUEL TOBIAS. Philadelphia and Reading Terminal Railroad and Station in Philadelphia, 181.

WATER.

"Consumption and Waste of—" (With Discussion.) Dexter Brackett, 185.

WATER MAINS.

"Moving Two 36-In. Water Mains Without Shutting Off the Water." E. C. Moore, 532.

"WATER-WORKS OF SYRACUSE, N. Y." William R. Hill, 23.
Discussion: J. J. R. Croes, 54, 57; E. Sherman Gould, 56; John Bogart, 58; Charles E. Emery, 60; J. N. Greene, 61; L. L. Buck, 62; G. L. Christian, 62.

Correspondence: J. L. Van Ornum, 63; John W. Hill, 63; L. J. Le Conte, 64; William R. Hill, 64.

"WHAT IS THE LIFE OF AN IRON RAILROAD BRIDGE?"
J. E. Greiner, 294.

Discussion: George S. Morison, 308; T. C. Clarke, 309; Joseph M. Wilson, 309.

Correspondence: James H. Stanwood, 310; Onward Bates, 312; C. D. Purdon, 314; G. B. Hazlehurst, 315; M. E. Yeatman, 317; L. J. Le Conte, 318; Walter Katté, 318; George H. Pegram, 320; R. Montfort, 323; J. P. Snow, 325; Theod. G. Hoech, 327; C. C. Schneider, 328; J. E. Greiner, 335.

WEBB, W. L. Survey of Mexico-United States Boundary, 279.

WEGMANN, EDWARD, JR.

High Masonry Dams, 508.

Moving 36-In. Water Mains, 536.

WILSON, JOSEPH M.

Life of an Iron Railroad Bridge, 309.

"The Philadelphia and Reading Terminal Railroad and Station in Philadelphia," 115, 184.

WORTHEN, WILLIAM E. High Masonry Dams, 505.

YEATMAN, M. E. Life of an Iron Railroad Bridge, 317.